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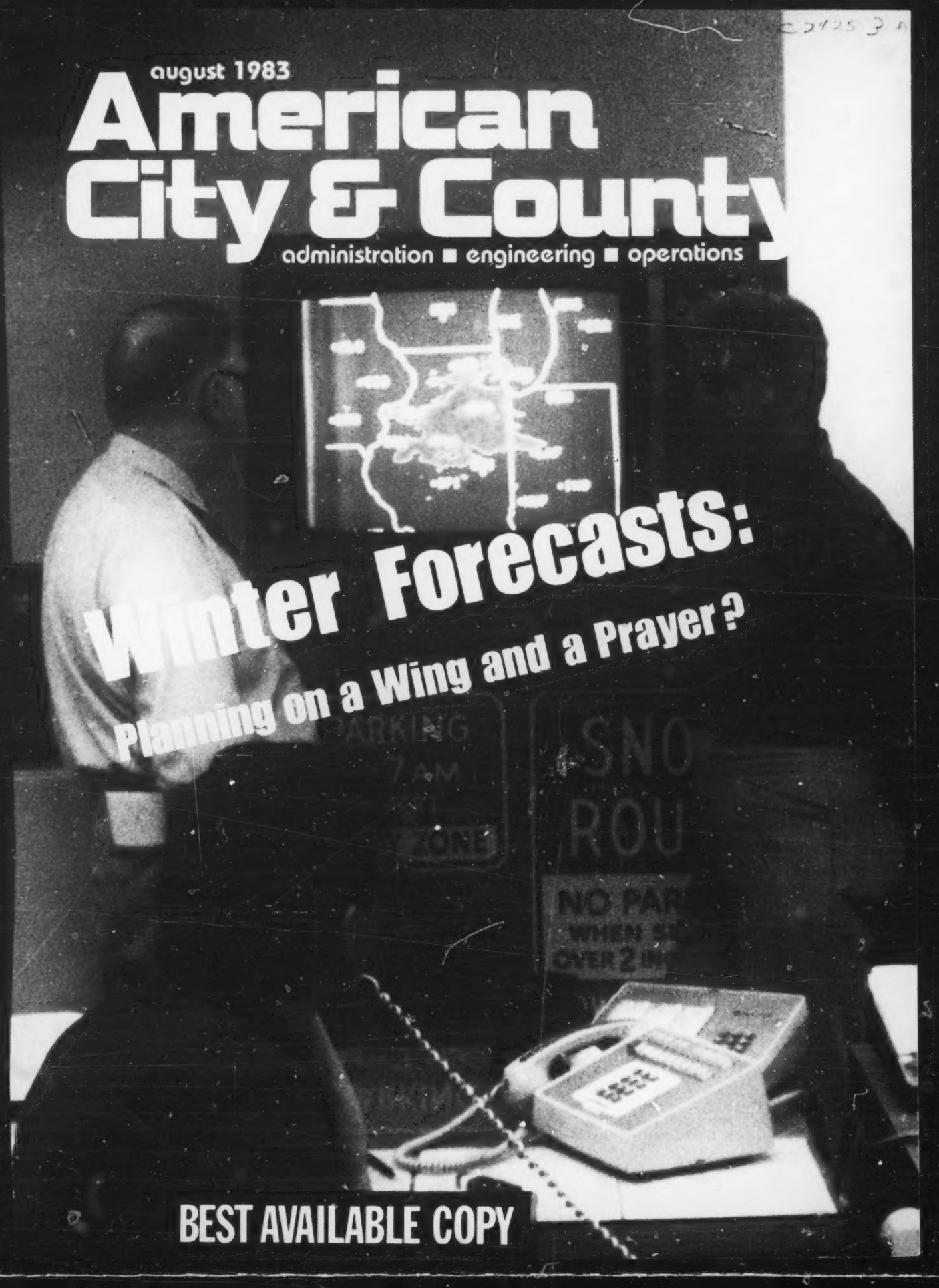

Winter Forecasts:

Planning on a Wing and a Prayer?

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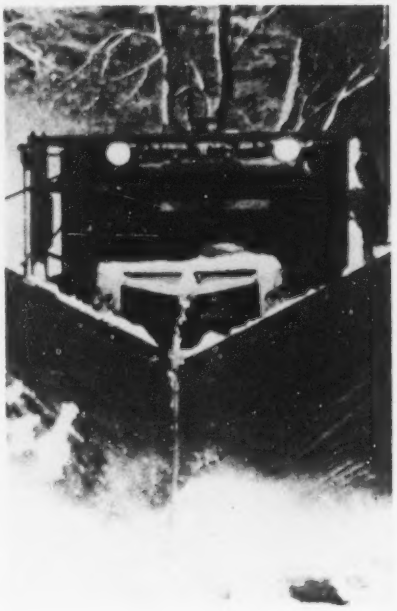
On the cover: A weather eye is kept on the *Radac* color weather radar used in the City of Chicago's snowfighting command post in this photo provided by Kavoura, Inc., of Minneapolis, Minn.

Will it snow? How much? When?

How cities get the weather word

An exclusive ACC survey of snow-belt road superintendents and public works officials shows that 60 percent use a private weather forecasting service. Others use TV and radio reports, the U.S. Weather Service, and road patrols. Some just guess.

By JOHN FOSTER, Senior Editor



A winter storm approaches. But when will it arrive? How long will it last? How much precipitation will it deliver, and in what form—ice, freezing rain, snow? If the snow starts as rain, will it turn to ice and snow?

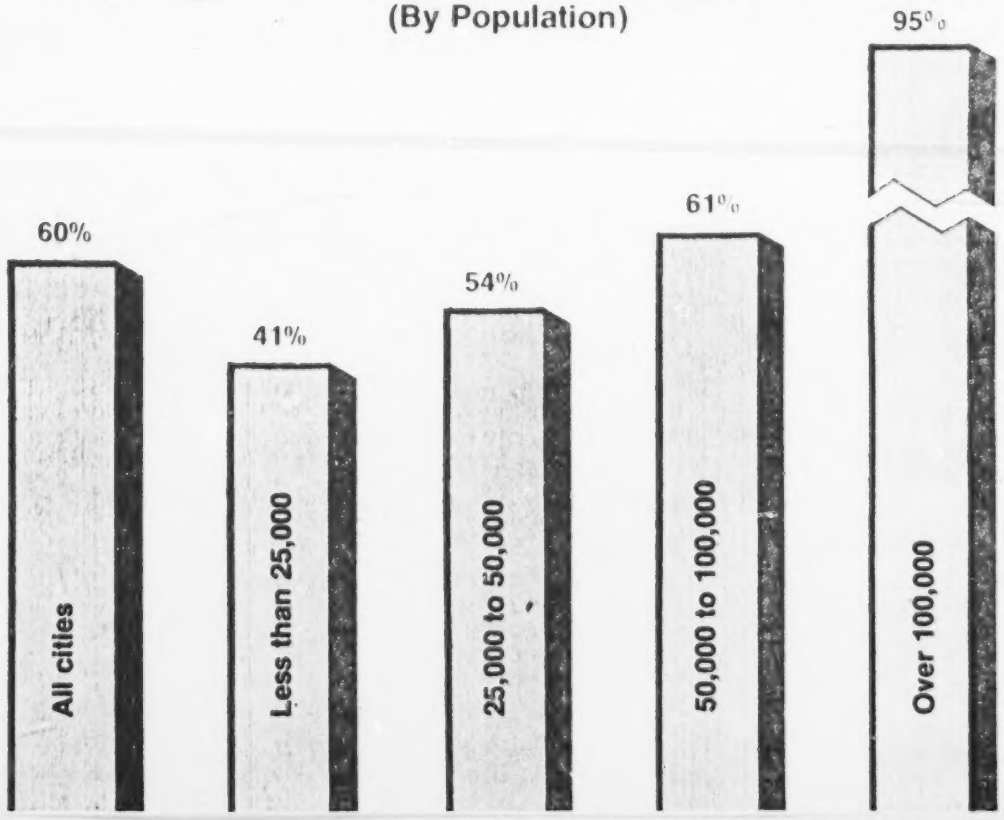
These questions have been haunting winter storm forecasters for as long as people have tried to forecast the weather. And despite recent and dramatic improvements in meteorological equipment, the old saw remains as true today as ever—though everybody talks about the weather, nobody is doing anything about it.

In recent years, meteorologists have used a number of high-tech tools to increase the accuracy of their forecasts. Radar, weather satellites, and the like have helped make forecasting a less risky business—but only relatively less risky. Weather forecasting is still an imprecise science.

Winter weather forecasting for cities is especially critical. Accurate forecasts can be a tremendous aid in the scheduling of manpower and equipment. Accurate forecasts also help determine a course of action—whether plowing, salting or sanding.

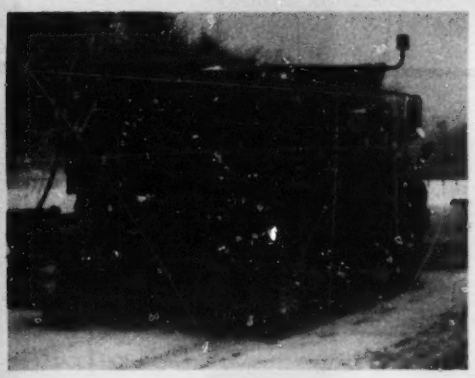
How do cities cope with the vagaries of winter weather forecasting? Increasingly they are turning to private weather forecasting services for the latest and most accurate weather information.

Percentage of cities that subscribe to weather services
(By Population)



According to an AMERICAN CITY & COUNTY survey of public works officials, private weather forecasting services offer cities improved weather forecasting ability over traditional forecasting methods. In general, those towns with populations over 100,000 which were covered by the survey, 19 were subscribers to some kind of weather forecasting service. On the other hand, only 11 out of the 27 cities with populations under 25,000 which were surveyed than overtime, generally pays for the year's weather contract."

Of course, weather forecasting services are not infallible. Even using the most sophisticated materials and equipment, the services make forecasting mistakes.



and cities that use such services are satisfied with them.

Of the 95 snowbelt road superintendents and public works officials who responded to the recent ACC survey, fifty-seven, or 60 percent, said they subscribed to a private weather forecasting service. And thirty-eight (40 percent) reported that they did not subscribe to such a service.

As a general rule of thumb, the larger the city, the more likely it is to subscribe to a forecasting service. Of the 20 cities subscribe to such a service.

And what are the benefits of a private weather forecasting service? Increased accuracy is the most frequently cited advantage. "The service has been fairly reliable with advance warning," said the Director of Operations in Alexandria, Vir. The Superintendent of Streets in Kansas City said: "We have used a private weather service for over 10 years. The key to effectiveness is knowing what information you need, and at what time intervals, and then following through to insure that the requested service is provided."

The Chief of Snow Operations in New York City said, "timely and accurate forecasts and updates assist us in the deployment of men and equipment." From Scarsdale, New York the Director of Public Works reported: "The weather service has saved us many false starts and also has helped improve our snow removal procedures by the early warning." And the Director of Public Works in Southbridge, Mass., said: "We are satisfied with our weather forecasting service. Getting a lead on just one storm to ready plows on straight time rather

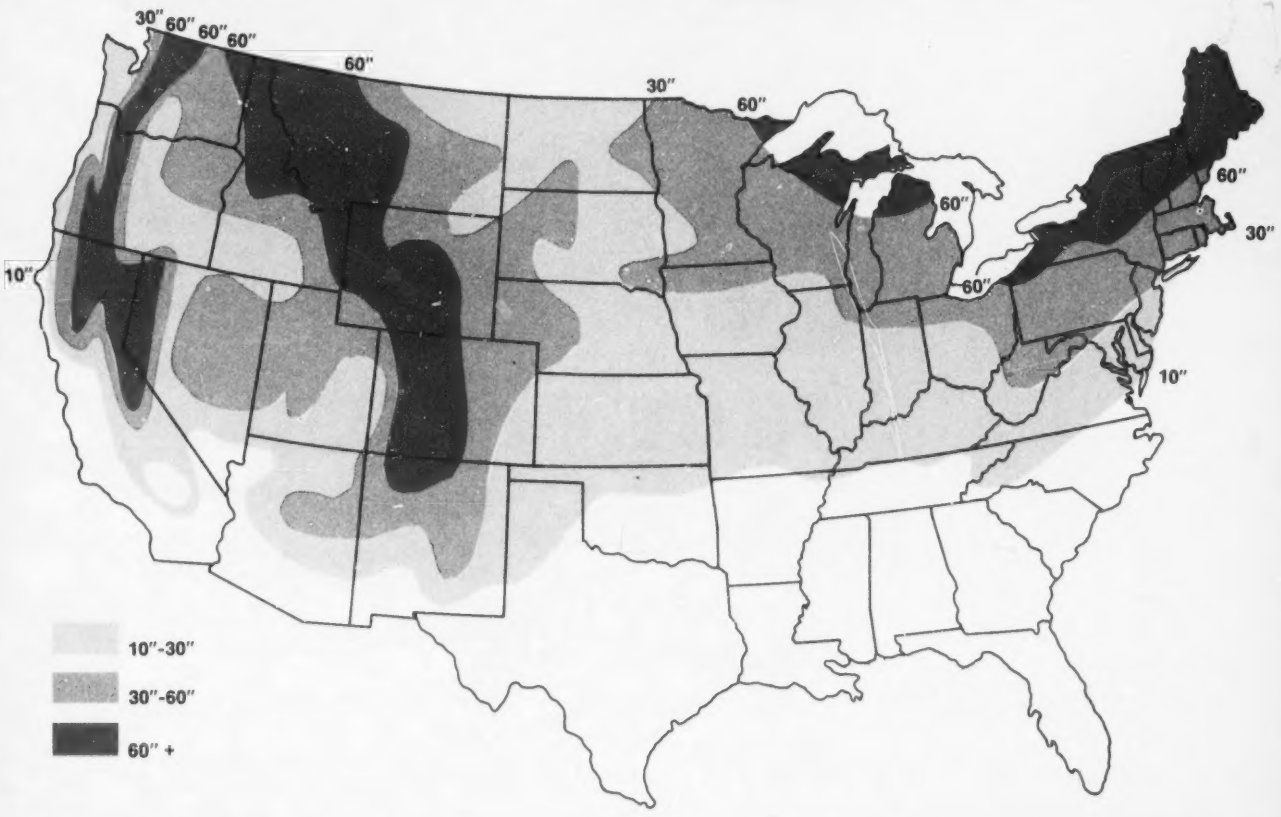
The Superintendent of Public Works in Storrs, Conn., said: "Too many conflicting forecasts confuse both the public and our snowfighting crews. We have hired a weather forecasting service for our town, and this has helped to clear up some of the confusion. But of course, there is always room for improvement.

In general, in spite of what meteorologists say, weather forecasting still needs much improvement." And the Director of Public Works in Glen Ellyn, Ill., said: "We have tried forecasting services in the past, and found them to be no more reliable than weather bureau or media forecasts."

It is obvious that there are definite plusses and minuses associated with weather forecasting services. But according to the cities and towns that use them, the advantages outweigh the disadvantages.

Of the eleven cities and towns with populations under 25,000 which reported subscribing to a weather forecasting service, nine said they were satisfied with the service. All 15 cities with populations between 25,000 and 50,000 which subscribed to a forecasting service

Where the heaviest snow falls



said they were satisfied. Ten of the eleven cities between 50,000 and 100,000 which subscribed to a forecasting service were satisfied with the service. And 16 out of the 19 cities above 100,000 population which used a service reported they were satisfied with its performance.

As weather forecasting technology continues to improve, hopefully weather predicting capability will improve, as well. But in the meantime, road superintendents and public works officials continue to make do with the best available information.

We asked the survey respondents what other sources of information they use to obtain their winter weather information. Many (72 out of 95) report that they use information supplied by the U.S. Weather Service. Even more, (75 out of 95) say they use the weather reports on local television and radio. Several reported using local airport weather reports. And 38 out of the 95 survey respondents reported using information supplied by department road patrols. Other sources of weather information reported by the survey respondents included remote temperature and moisture sensing devices, cable television reports, state department of transportation reports, state and local police reports, and other city agencies that may subscribe to a weather forecasting service.

We also asked the survey repondents for their suggestions on how to improve winter storm forecasting ability. The answers covered a wide spectrum from thought provoking to somewhat whimsical.

"We could use more frequent updating of storm forecasts, especially when the forecasts are different from radio and television broadcasts. We need reports every hour once the storm begins."

"We need better communications between the state highway department, the state police, local police, and the public works department as a storm moves into the area."

"We could use temperature and precipitation sensors in bridge decks to indicate concrete temperature and dangerous road conditions."

"It would be nice if we had a direct line to mother nature. It would be nice if we could just order the weather we want."

"Pray regularly, meditate daily, get plenty of bed rest, and don't panic."

Perhaps the last may be the best advice of all when Old Man Winter decides to come calling. **ACC**

About the survey

The charts and tables presented here, and the information in the accompanying article are based on the results of a recent AMERICAN CITY & COUNTY mail survey. In May, ACC sent questionnaires to approximately 240 city and public works officials who had attended the 1983 North American Snow Conference in Hartford. A total of 95 completed questionnaires were returned.

While the results represent a solid cross-section of U.S. cities—there was a well-balanced return from both large and small cities—the results are somewhat biased toward the northeast. Because the Snow Conference was held in Hartford, a high proportion of the officals attending the show were from New England and the Mid-Atlantic states. However,were a sufficient number of responses from the midwest and the mountain states to draw con clusions from there, as well. ■

Municipal Cost Indexes

Commodity prices continued to drop this month, as reflected in the reduction of the annual increase in the MUNICIPAL COST INDEX to 3.5 percent this month, as compared to 4.1 percent last month. Falling prices for most commodities were evident, although some sizeable increases were seen in the fuel categories. Construction materials maintained stable price levels, thus allowing the ACC CONSTRUCTION COST INDEX to rise only 0.1 percent for the month and 5.7 percent for the last 12-month period. ■

THIS MONTH'S MARKETBASKET

	Current Index	Percent Change From: Last Month	Last Year
Air Conditioners	142.5	-0.2	6.3
Apparel	195.1	0.2	1.2
Asphalt Roofing	378.6	-2.7	-1.4
Books	119.2	0.6	—
Chemicals, Industrial	339.8	0	-5.1
Coal	535.0	-0.8	0.1
Concrete Products	301.0	0.2	1.3
Construction Machinery	352.2	0.4	2.6
Diesel Fuel	650.9	-0.1	-11.9
Electric Lamps	307.4	-0.9	6.7
Electric Motors	304.1	0.3	5.8
Electric Power	412.5	0.7	1.7
Electronic Components	180.2	0.1	2.5
Engines, I.C.	342.7	0.7	5.5
Fans and Blowers	336.9	0.2	0.6
Fertilizers	260.3	0.1	-4.0
Floor Coverings	181.3	-0.1	0.4
Footwear	248.7	0.1	2.6
Foundry Products	352.3	0.1	1.8
Fuel Oil No. 2	688.6	4.8	-8.1
Furniture	286.6	0	4.0
Gasoline	587.4	4.1	-3.7
Generator Sets	348.3	1.4	2.2
Glass	229.7	0	6.2
Glass Containers	351.8	-0.6	-1.6
Gypsum Products	275.3	1.4	6.1
Hardware	286.2	0	3.4
Heating Equipment	242.4	0	2.1
HVAC Controls	122.9	-0.7	7.3
LP Gas	725.2	2.3	34.7
Lubricants	352.4	-0.4	0.1
Lumber	381.2	1.8	18.9
Metal Fabrications	302.1	-0.2	-0.9
Millwork	298.8	-1.3	8.3
Motor Vehicle Parts	352.2	0.2	2.5
Mowers	250.7	-0.6	9.3
Natural Gas	1438.5	-0.6	10.8
Office Machines	154.5	-0.2	2.3
Paint	265.1	0	0
Paper	279.1	0.1	-3.4
Passenger Cars	217.3	0.4	2.8
Plumbing Fixtures	288.8	0.5	2.8
Plywood	240.9	0.7	4.5
Portland Cement	338.5	2.5	0
Pumps,	347.4	-0.1	-0.3
Residual Fuel	1052.5	-3.1	-11.5
Sand and Gravel	286.2	0.5	2.4
Sanitary Papers	362.4	-0.4	3.8
Soaps, Detergents	261.1	0	3.4
Sporting Goods	206.5	-0.3	-7.3
Steel Mill Products	350.0	0	-0.3
Struct. Clay Prod.	277.0	0.6	7.3
Switchgear	268.6	0	3.3
Tires and Tubes	246.5	0	-3.3
Transformers	223.4	-0.9	0.3
Trucks	312.9	-1.5	3.9
Valves	100.7	0.4	—
Wire and Cable	206.2	0.2	-1.0
Wiring Devices	333.6	0.5	3.1

At-A-Glance Changes

ACC MUNICIPAL COST INDEX

Percent Change From Last Month +0.3 Year +3.5

ACC CONSTRUCTION COST INDEX

Percent Change From Last Month +0.1 Year +5.7

CONSUMER PRICE INDEX (BLS)

Percent Change From Last Month +0.5 Year +3.5

PRODUCER PRICE INDEX (BLS)

Percent Change From Last Month +0.2 Year +2.3

QUARTERLY MUNICIPAL TRENDS

	Current Level	Percent Change From: Last Qtr.	Last Year
Receipts	$440.5B	1.4	4.8
Federal Grants	84.2B	2.7	0.7
Durable Purchases	12.7B	1.6	4.1
Consumables	32.8B	1.2	4.8
Services	83.7B	1.7	7.9
Structures	42.0B	2.9	1.0
Salaries, Wages	228.4B	1.6	7.2
Surplus	+$32.3B	0.6	-3.6
Employment	13.007M	0	-1.2